

DEPARTMENT OF HEALTH SERVICES

714/744 P STREET
SACRAMENTO, CA 95814

Facility:	Solar Turbines, Inc.)	<u>HAZARDOUS WASTE FACILITY PERMIT</u>
	(Harbor Drive Plant))	
	2200 Pacific Highway)	EPA ID Number: CAD008314908
	San Diego, CA 92138-5376)	
)	Effective Date:
Operator:	Caterpillar Tractor Company)	
	100 Northeast Adams Street)	Expiration Date:
	Peoria, IL 61629)	
)	
)	

Pursuant to Section 25200 of the California Health and Safety Code, this Hazardous Waste Facility Permit is hereby granted to Solar Turbines, Inc. (Harbor Drive Plant) The issuing of this permit is subject to the conditions set forth in Attachment A which consists of 27 pages and any other exhibits.

Kenneth W. Kizer, M.D., M.P.H.
Director

Date

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Hazardous Waste Facility Permit
for
Solar Turbines, Inc.
(Harbor Drive Plant)
2200 Pacific Highway
San Diego, CA 92138-5376
EPA ID No.: CAD008314908

I. DESCRIPTION OF FACILITY

A. Ownership, Operations, and Location

Solar Turbines Incorporated (Harbor Drive Plant) has applied for a Hazardous Waste Facility Permit to allow them to continue operation of their hazardous waste storage/treatment facility. Solar Turbines, Inc. is a subsidiary of the Caterpillar Tractor Company and is located at 2200 Pacific Highway, San Diego, CA.

Solar Turbines, Inc. manufactures components used in the assembly of gas turbine engines. These, along with boost compressor pumps are relied upon to step up pressure in oil transportation pipelines. Gas turbines are also used to power electrical generators. Other on-site operations include testing facilities to conduct product performance and developmental engineering evaluation.

Hazardous wastes are generated from various operations: metal chips produced during machining operations are stored in gondolas periodically removed by a scrap metal company. These operations also produce waste coolants and oils which are largely recycled. That portion which is not recyclable is pumped into a 3,000-gallon tank and run through an oil/water separator. The remaining sludge along with grinding dust and waste oil is disposed of at an authorized hazardous waste disposal facility.

Similarly, process tanks used to clean sheet metal parts prior to assembly and high temperature brazing produce acid waste. This is solidified by a licensed company and then disposed of at an authorized hazardous waste facility.

Kolene waste, generated from a salt bath used to descale castings prior to painting, is disposed of at a licensed Class I hazardous waste facility. Likewise, paint and solvent sludge and acid waste produced from plating operations are stored and disposed of off site.

1,1,1-trichloroethane (methy chloroform), a nonflammable, nonwater soluble solvent used to clean precision instruments, is recycled at the facility. Remaining sludge is solidified and disposed of at a Class I site.

B. Compliance With California Environmental Quality Act (CEQA)

New facilities require an environmental impact report or a negative declaration. Existing facilities require a CEQA exemption document noting the appropriate section of the California Administrative Code (CAC).

II. GENERAL CONDITIONS

A. References and Terminology

All parts in this permit are identified by Roman numerals. The items set forth in each part shall apply to the owner, operator, and/or facility in addition to the items set forth in any preceding and/or following part of this permit. Unless explicitly stated otherwise, all cross-reference to items in this permit shall refer only to items occurring within the same part.

B. Effect of Permit

The owner or operator is permitted to store/treat hazardous wastes in accordance with the conditions of this permit. Any storage/treatment of hazardous wastes not authorized in this permit is prohibited. Compliance with this permit constitutes compliance for purposes of enforcement, with the provisions of the California Health and Safety (H&S) Code, in regards to the facility permit requirements including Chapters 6.5 and 6.7, Division 20, and with the Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes (Chapter 30, Division 4, Title 22, CAC). Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of federal, state, or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any action brought under any other law governing protection of public health or the environment for any imminent and substantial endangerment to human health or the environment.

C. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause as specified in Sections 66382, 66383, and 66385, Title 22, CAC. A new facility permit condition or a modification of an existing facility permit condition shall become effective on the date that written notice of such change is received by the owner or operator. The filing of a request for a permit modification, revocation and reissuance, or termination or the modification of planned changes or anticipated noncompliance on any part of the owner or operator does not stay the applicability or enforceability of any permit condition.

D. Need to Halt or Reduce Activity

It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

E. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

F. Operation Plan

1. By the issuance of the permit, the Operation Plan dated January 21, 1987 is hereby approved. This Operation Plan and any subsequent revisions thereof, subject to the approval of the Department, are by this reference made part of this permit. Specific sections of this Operation Plan are referenced elsewhere in this permit.
2. The owner or operator shall operate and maintain the facility in accordance with the Operation Plan.
3. In the event of any conflict between this permit and the Operation Plan referenced herein, the provisions of the permit shall be controlling.
4. The Operation Plan shall be maintained at the facility and place of business at all times until closure is completed.

G. General Responsibilities of Operator

1. Compliance
 - a. The owner or operator shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit or approved by the Department. Any permit noncompliance constitutes grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.
 - b. The owner or operator shall comply with all laws, regulations, permits, zoning conditions, and all other requirements established by federal, state, and local agencies applicable to the proper management of hazardous waste.

2. Reapplication

If the owner or operator wishes to continue an activity regulated by this permit after the expiration date of this permit, the owner or operator must submit a completed application for a new permit at least 180 days before this permit expires.

3. Permit Expiration

This permit and all conditions therein will remain in effect beyond the permit expiration or termination date if the owner or operator has submitted a timely, completed application and, through no fault of the owner or operator, the Department has not issued a new permit.

4. Transfer of Permit

This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to Sections 66382 (b) (2) or 66385 (d), Title 22, CAC. The owner or operator shall notify the Department of a proposed change in ownership of this facility at least 30 days prior to the date of the transfer. Furthermore, before transferring ownership or operation of the facility during its operating life, the owner or operator shall notify the new owner or operator in writing of the requirements of this permit and the permitting process. A copy of this notification shall be submitted to the Department.

5. Mitigation

The owner or operator shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. Operation and Maintenance

- a. The facility shall be maintained at all times and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or ground water which could threaten human health or the environment.
- b. All equipment, pipes, and lines used at the facility to handle, transfer, pump, or store hazardous wastes shall be maintained in a manner that prevents the leaking and spilling of hazardous wastes.
- c. The owner or operator shall at all times properly operate and maintain the storage/treatment facility and related appurtenances which are installed or used by the owner or operator to achieve compliance with

the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of the permit.

7. Submittal of Requested Information

The owner or operator shall furnish to the Department, within a reasonable time, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, terminating this permit, or to determine compliance with this permit. The owner or operator shall also furnish to the Department; upon request, copies of records required to be kept by this permit.

8. Hazardous Waste List

The owner or operator shall maintain a current list of hazardous wastes generated by the facility. The owner or operator shall, as necessary, update the hazardous waste list presented in the approved Operation Plan. Any additions to the list must be approved by the Department prior to their inclusion.

9. Records

- a. Rainwater collected in the storage/treatment area shall be sampled and analyzed before any such waters are discharged. Said waters may only be discharged if analysis shows that the waters are nonhazardous according to the criteria set forth in the Department's Criteria for Determining Hazardous and Extremely Hazardous Waste regulations and the owner or operator receives permission for such discharge from the Central Valley Regional Waste Quality Control Board.
- b. Samples taken for the purpose of monitoring shall be representative of the monitored activity. Laboratory and sampling methods must be those specified in the approved Operation Plan.
- c. The owner or operator shall retain copies of all reports and records required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of such report or record. These periods may be extended by the Department at any time and are

automatically extended during the course of any unresolved enforcement action regarding this facility.

10. Inspection and Entry

The owner or operator shall allow authorized representatives of the Department, the State Water Resource Control Board, a Regional Water Quality Control Board, or the local health agency, upon the presentation of credentials and other documents as may be required by law to:

- a. Enter at reasonable times upon the owner's or operator's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or, as otherwise authorized by law, any substances or parameters at any location.

11. Planned Changes

The owner or operator shall obtain approval from the Department as soon as possible and at least 30 days in advance of any planned physical alterations or additions affecting operation of the hazardous waste area of the permitted facility.

12. Anticipated Noncompliance

The owner or operator shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The owner or operator shall report to the California Office of Emergency Services (800) 852-7550 any circumstances that may endanger public health or the environment, immediately upon becoming aware of the incident.

13. 24-Hour Reporting

The owner or operator shall report to the Department any noncompliance which may endanger health or the environment. Such information shall be provided verbally within 24 hours from the time the owner or operator becomes aware of the

noncompliance. The following shall be included as information which must be reported verbally within 24 hours to:

California State Department of Health Services
Toxic Substances Control Division
Northern California Section
4250 Power Inn Road
Sacramento, CA 95826
(916) 739-3145

- a. Information concerning any release of hazardous waste which may cause an endangerment to public drinking water supplies.
- b. Information concerning any release or discharge of hazardous waste, or of fire or explosion from the facility, which could threaten human health or the environment outside the facility. The description of the occurrence and its cause shall include:
 - (1) Name, address, and telephone number of the owner or operator;
 - (2) Name, address, and telephone number of the facility;
 - (3) Date, time, and type of incident;
 - (4) Name and quantity of material(s) involved;
 - (5) The extent of injuries, if any;
 - (6) An assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable; and
 - (7) Estimated quantity and disposition of recovered material that resulted from the incident.

A written submission shall also be provided within five days of the time the owner or operator becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times), and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

14. Other Noncompliance

The owner or operator shall report all other instances of noncompliance not otherwise required to be reported at the

time monitoring or other reports are submitted. The reports shall contain the information listed in item II.G.13 above.

15. Other Information

The owner or operator shall promptly submit all facts or information which have been omitted or which correct information in the permit application or any other report submitted to the Department.

H. Signatory Requirement

All reports or other information requested by the Department shall be signed by the owner or operator. For a corporation, this would be a responsible corporate officer, for a partnership or sole proprietorship, by a general partner, or the proprietor, respectively, and for a municipality or other public agency by a principal executive officer or ranking official. The person signing the document shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Certification of Construction

The owner or operator may not commence treatment, storage, or transfer of hazardous wastes at the facility or modified portion of the facility until:

1. The owner or operator has submitted to the Department by certified mail or hand delivery a letter signed by the owner or operator and an appropriate engineer registered in California stating that the facility has been constructed in compliance with the permit; and
2. The Department has inspected the constructed facility and finds it is in compliance with the conditions of the permit; or
3. The Department has either waived the inspection or has not within 15 days notified the owner or operator of its intent to inspect.

J. Waste Minimization Certification

The owner or operator shall retain original signed copies for at least three years from the date of certification of the following statement on waste minimization.

"I hereby certify under penalty of law that personnel under my direction and supervision at this facility are undertaking specific steps in accordance with a program in place to minimize the amount and toxicity of hazardous wastes generated at this facility to a degree economically practicable and that the method utilized for the treatment, storage, or disposal of hazardous wastes is the practicable method currently available to this facility which minimizes the present and future threat to human health and the environment. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment for flagrant falsifications."

Signature

Name

Title

Date

The owner or operator shall make this certification at least annually and shall retain these copies as part of the facility's written operating record as required in conditions III.Q.2.a (6) and III.Q.3.a of this permit.

III. SPECIAL CONDITIONS

A. Prohibition of Disposal

Hazardous wastes shall not be permanently disposed of at the facility unless such disposal is properly permitted.

B. Wastes Prohibited

Hazardous wastes described below shall not be handled at the facility:

1. Extremely hazardous wastes as defined in Sections 66720 and 66723, Title 22, CAC, unless specifically approved by the Department;

2. Forbidden and Class A explosives as defined in Sections 173.51 and 173.53, Title 49, CFR;
3. Any hazardous waste not listed in the approved Operation Plan or otherwise approved by the Department; and
4. Any hazardous waste generated outside the premises of the facility.

C. Storage Conditions

1. Storage in Containers

- a. Containers holding hazardous wastes shall be stored only in the area designated in the approved Operation Plan.
- b. A container holding hazardous waste shall remain closed during storage, except when it is necessary to add or remove waste.
- c. A container holding hazardous waste shall not be handled or stored in a manner which might rupture the container or cause it to leak.
- d. A label shall be maintained on all containers in which hazardous wastes are stored. Labels shall include the following information:
 - (1) Composition and physical state of the waste;
 - (2) Special safety recommendations and precautions for handling the waste;
 - (3) Statement or statements which call attention to the particular hazardous properties of the waste;
 - (4) Name and address of the facility producing the waste; and
 - (5) Date accumulation begins.
- e. Empty containers contaminated with hazardous waste or hazardous materials shall be stored, handled, and processed as hazardous waste or recycled whenever possible.
- f. The total number of containers storing hazardous waste in the storage area shall not exceed the designed capacity of the storage area at any one time.
- g. Containers used for storing hazardous waste shall be in a condition such that the containers can be safely transported, handled, or moved.

h. If a container holding hazardous waste is not in good condition, or if it begins to leak, the owner or operator shall transfer the hazardous waste from this container to a container that is in good condition, or manage the waste in some other way that complies with the conditions of this permit.

i. Compatibility of Waste with Containers

The owner or operator shall use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

j. Containment

(1) For all containment areas the owner or operator shall provide a spill containment system in accordance with the approved Operation Plan. Specifically, each hazardous waste storage area shall have a continuous base that is impervious to the waste stored and shall be designed and constructed so that any spills can be contained.

(2) In addition to the requirements of item (1) above, the containment system shall be constructed so that surface water run-off is contained and surface water run-on is excluded. The containment system shall have sufficient capacity to contain ten percent of the volume of containers or the volume of the largest container, whichever is greater. Outdoor containment areas must also contain precipitation from a 24-hour, 25-year storm.

(3) Spills, leaks, and precipitation shall be promptly removed from the containment area to prevent overflow.

k. PCB Wastes

Containers holding PCBs or devices containing PCB wastes shall comply with the current applicable requirements of Part 761, Title 40, CFR.

2. Storage in Tanks (Aboveground Tanks)

a. Design of Tanks

(1) The owner or operator shall construct all tanks in accordance with the approved operation plan.

(2) The owner or operator shall maintain the minimum shell thickness specified in the approved

Operation Plan at all times to ensure sufficient shell strength.

- (3) Prior to use, new, replacement, or repaired hazardous waste storage tanks and their appurtenances shall be certified by a civil engineer registered in California to be structurally sound and of adequate construction for the intended use.
- (4) Each hazardous waste storage tank and storage area shall be individually marked with the internationally recognized hazard identification system placards developed by the National Fire Prevention Association.
- (5) The total volume of hazardous waste stored in tanks shall not exceed the designed capacity.

b. Containment

- (1) For all containment areas, the owner or operator shall provide a spill containment system in accordance with the approved Operation Plan. Specifically, each hazardous waste storage area shall have a continuous base that is impervious to the waste stored, shall be designed and constructed so that any spills can be contained, and shall have sufficient capacity to contain ten percent of the total volume of the tanks or the volume of the largest tank, whichever is greater.
- (2) In addition to the requirements of item (1) above, outdoor uncovered containment areas shall contain all surface water run-off, exclude all surface water run-on, and contain precipitation from a 24-hour, 25-year storm.
- (3) Spills, leaks, and precipitation shall be promptly removed from the containment area to prevent overflow.

c. Operation

- (1) Hazardous wastes shall not be placed in a tank if they could cause the tanks or its liner to rupture, leak, corrode, or otherwise fail before the end of its intended life.
- (2) Uncovered tanks shall be operated to ensure at least 60 centimeters (2 feet) of freeboard.
- (3) Valves on hazardous waste storage tanks shall be kept locked when the facility is unattended.

3. Storage in Tanks (Underground Tanks)

An accurate daily inventory of wastes shall be maintained and reconciled on each underground tank to determine natural gain or loss of waste. If significant gain or loss is noted, all meters and gauges shall be checked for error and reconciled; and if discrepancy cannot be reconciled, the tank shall be tested and if necessary be emptied and repaired, or taken out of service.

4. Special Condition

Every underground facility used for storage/treatment of hazardous waste, including tanks, sumps, and pipelines (which has any portion of its total structure embedded in the ground) shall meet the requirements of the H&S Code, Section 25291, and shall as a minimum

- (a) Provide a visual inspection of the sump and pipelines wherever practical for the purpose of the monitoring required by H&S Code. Visual inspection should be done on a weekly or more frequent basis to be consistent with the regulations of the California RWQCB.
- (b) Provide a physical inspection and testing of the sump and pipelines wherever practical to detect the cracks on the concrete. Physical inspection and testing shall be repeated on a semiannual or more frequent basis. This inspection shall require emptying and thorough cleaning of the unit on the same frequency.

D. Treatment Conditions

Operations and maintenance of the treatment system shall be conducted in accordance with Section IV.D of the approved Operation Plan.

- 1. The mixing and blending of potentially incompatible materials and wastes for purposes of recovering resources, neutralizing wastes, to detoxifying wastes shall be carried out under controlled conditions to ensure that violent reactions, extreme heat, or fire do not occur and that toxic or flammable gases and vapors are not released into the atmosphere.
- 2. Hazardous wastes or treatment reagents shall not be placed in the treatment process or equipment if they cause the treatment process or equipment to rupture, leak, corrode, or otherwise fail before the end of its intended life.

E. Management of Ignitable, Reactive, or Incompatible Wastes

1. The storage/treatment of ignitable, reactive, or incompatible wastes and materials shall be conducted so that it does not:
 - a. Generate extreme heat or pressure, fire or explosion, or violent reaction;
 - b. Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
 - c. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - d. Damage the structural integrity of the device or facility containing the waste; or
 - e. Through other like means threaten human health or the environment.
2. Ignitable or Reactive Waste
 - a. The owner or operator shall take precautions to prevent accidental ignition of ignitable wastes or reaction of reactive wastes. This waste shall be separated and protected from sources of ignition or reaction. While ignitable or reactive waste is being handled, the owner or operation shall confine smoking and open flame to specially designed locations. "No Smoking" signs shall be conspicuously placed wherever there is a hazard from ignitable or reactive waste.
 - b. Each container or tank holding ignitable or reactive waste shall be situated at 15 meters (50 feet) from the property line of the facility.
 - c. Ignitable or reactive waste shall not be placed in a container or tank for storage/treatment unless:
 - (1) The waste is treated, rendered, or mixed before placement in the container or tank so that the resulting waste, mixture, or dissolution of materials is no longer ignitable or reactive and item III.E.1 of this permit is complied with;
 - (2) This waste is stored or treated in such a way that it is protected from any material or condition which may cause the waste to ignite or react; or
 - (3) The container or tank is used solely for emergencies.

- d. Storage of ignitable or reactive waste in covered tanks shall comply with the National Fire Protection Association buffer zone requirements published annually in National Fire Codes (Codes 30, Volume 3).

3. Incompatible Wastes

- a. Hazardous waste shall not be placed in an unwashed container or tank that previously held an incompatible waste or material.
- b. Areas used for storing containers of incompatible hazardous waste shall be widely separated. Impermeable physical barriers such as berms, dikes, or walls shall be provided to ensure that commingling of incompatible hazardous wastes cannot occur.
- c. The following incompatible hazardous waste groups shall be adequately separated from each other during all handling and storage operations:
 - (1) Cyanides shall be separated from acids.
 - (2) Organic acids shall be separated from toxics.
 - (3) Reactive toxic metals shall be separated from water.

F. Operation at Night

When the facility is operated during hours of darkness, the owner or operator shall provide sufficient lighting to ensure safe, effective management of hazardous wastes.

G. Recycling

If requested by the Department, in accordance with Article 12, Chapter 30, Division 4, Title 22, CAC, the owner or operator shall, within 30 days submit a written statement justifying having not recycled a waste which the Department has determined to be recyclable.

H. Waste Manifesting Procedures

1. The owner or operator shall complete and sign the generator section of the uniform hazardous waste manifest.
2. The owner or operator shall describe the wastes accurately. The description on the manifest shall include the type of waste, chemical composition, and special handling instructions.
3. The owner or operator shall indicate on the manifest whether the waste is a hazardous or extremely hazardous waste.

4. The owner or operator shall write on the manifest the Department of Transportation proper shipping name as required by the California Highway Patrol pursuant to Part 172, Title 49, CFR, for each load of hazardous waste before the waste is transported on a public road.
5. The owner or operator shall submit a copy of the manifest for each load of a hazardous waste, with the generator section properly completed, to the registered hazardous waste hauler to whom he transfers custody of the waste when transfer occurs.
6. In cases of large waste volumes which require several loads, the owner or operator may submit one manifest daily to the same registered hazardous waste hauler as long as the waste, the driver, and the date of hauling remain unchanged. Each manifest shall include the volume of the waste hauled by the registered hazardous waste hauler.
7. The producer of hazardous waste shall submit each month a legible copy of each manifest used during the previous month to the Department. The manifest shall contain all information required in the generator and transporter sections of the manifest. The producer of hazardous waste must contact the Department if a copy of the manifest is not received from the off-site disposal facility.

I. Analysis of Waste

1. Upon the effective date of this permit, the owner or operator shall follow the written waste analysis plan as described in the approved Operation Plan.
2. a. Prior to the storage/treatment of a particular type of hazardous waste for the first time (or the use of a treatment process which differs substantially from the previously used), the owner or operator shall:
 - (1) Conduct waste analyses and trial treatment tests (e.g., bench scale or pilot plant scale tests);
or
 - (2) Obtain documented information on similar treatment of similar waste under similar operating conditions.
- b. These tests or information shall include data pertaining to the compatibility of wastes with the container or tank used for storage/treatment of these wastes.
- c. The owner or operator shall ensure that the storage/treatment of any hazardous waste will not:

- (1) Generate extreme heat or pressure, fire or explosion, or violent reaction;
 - (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
 - (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - (4) Damage the structural integrity of the device or facility containing the waste; or
 - (5) Through other like means threaten human health or the environment.
3. The analysis shall be repeated, as necessary, to ensure that it is accurate and up-to-date. As a minimum, the analysis must be repeated when the owner or operator is notified or has reason to believe that the process operation generating the hazardous waste has changed.
4. The owner or operator shall verify the waste analysis plan as part of the quality assurance program. This quality assurance program will be in accordance with current U.S. EPA practices (Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods SW-846 dated July 1982) or equivalent methods approved by the Department and, at a minimum, ensure that the owner or operator maintain proper functional instructions, uses approved sampling, and analytical methods assures the validity of sampling and analytical procedures, and performs correct calculations.
5. Data developed for other purposes, and existing published or documented data on the hazardous waste or on waste generated from similar process may supplement the waste analysis plan.
6. Samples taken for the purpose of monitoring shall be representative of the monitored activity.
7. The owner or operator shall retain records of all monitoring information as part of the operating record until closure of the facility.
8. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurement;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;

- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used;
- f. The results of such analyses; and
- g. (Optional) Collected drain water sampling/disposal.

J. Security

1. The owner or operator shall prevent the entry of unauthorized persons or livestock onto the active portion of the facility by maintaining the following:
 - a. A fence in good condition or other artificial or natural barrier which completely surrounds (the active portion of) the facility and has gates or other means to control entry; or
 - b. A 24-hour surveillance system which continuously monitors and controls entry to (the active portion of) the facility; or
 - c. The security procedures as described in the approved Operation Plan.
2. Signs indicating that the facility, or the hazardous waste area of the facility, contains hazardous waste shall be placed on the perimeter fence at the entrance and at locations where it is anticipated that unauthorized persons may enter the active portion of the facility.

Wording of the signs shall be in English, "Caution -- Hazardous Waste Area -- Unauthorized Persons Keep Out", and Spanish, "Cuidado! Zona de Residuos Peligrosos. Prohibida la Entrada a Personas No Autorizadas". Signs shall be legible from a distance of 25 feet.

K. Inspections

1. The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors, and discharges which may cause or may lead to the release of hazardous waste constituents to the environment or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.
2. The owner or operator shall inspect all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and pumps) that are important to preventing, detecting, or responding to the environmental or human

health hazards in accordance with the written inspection schedule in the approved Operation Plan.

3. The owner or operator shall test and maintain all safety and emergency equipment (alarm systems, fire protection equipment, spill control equipment, decontamination equipment) as necessary to ensure proper operation in the event of an emergency.
4. (storage in tanks) In accordance with the written inspection schedule in the approved Operation Plan, the owner or operator shall inspect:
 - a. Discharge and overfilling control equipment, at least once each operating day, to ensure that it is in good working order;
 - b. Data gathered from monitoring equipment, at least once each operating day, to ensure that the tank is being operated according to its design;
 - c. The level of waste in the tank, at least once each operating day, to ensure compliance with item III.C.2.a (5);
 - d. The construction materials of, and the area immediately surrounding the tank, at least weekly, to detect corrosion or leaking of fixtures or seams.
 - e. (Underground tanks) The construction materials of the readily visible portions of the tank, at least weekly, and the rest of the tank structures, at least semiannually, to detect the leak. The semiannual inspection will require emptying and thorough cleaning of the unit on the same frequency.
5. (Treatment facilities) In accordance with the written inspection schedule of the approved Operation Plan, the owner or operator shall inspect:
 - a. Treatment process equipment, at least once each operating day, to ensure that it is in good working order;
 - b. Process and operations monitoring equipment, at least once each operating day, to ensure that the treatment process or equipment is being operated according to its design;
 - c. The construction materials of the treatment process or equipment, at least weekly, to detect corrosion or leaking of fixtures or seams; and
 - d. The construction materials of, and the area immediately surrounding discharge confinement

structures, at least weekly, to detect obvious signs of leakage.

6. The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection identified as soon as possible to ensure that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately as described in the contingency plan.
7. The owner or operator shall record inspections in an inspection log or summary and shall keep these records for at least three years from the date of inspection.

L. Personnel Training

1. Facility personnel shall successfully complete the program of classroom instruction or on-the-job training which teaches them to perform at a level that ensures the facility's compliance with Chapters 6.5 and 6.7 of Division 20, H&S Code and with Chapter 30, Division 4, Title 22, CAC.
2. Personnel shall have successfully completed this program within six months after the date of their employment or assignment to a facility, or to a new position at the facility, whichever is later. Employees hired after the effective date of this permit shall not work in unsupervised positions until they have completed these training requirements.
3. Facility personnel shall take part in an annual review of the required training.
4. The owner or operator shall maintain the training records as identified in the approved Operation Plan.
5. Training records on current personnel shall be kept until closure of the facility. Training records on former employees shall be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

M. Personnel Protective Equipment

When handling hazardous waste containers, all personnel will wear, as a minimum, gloves, boots, and aprons of the type specified in the approved Operation Plan.

When cleaning up hazardous waste spills, all personnel will wear, as a minimum, gloves, boots, aprons, and either: (1) approved, fit-tested respirators with appropriate cartridges, or (2) self-contained breathing apparatus.

N. Contingency Plan

1. Implementation

- a. The owner or operator shall follow the contingency plan described in the approved Operation Plan.
- b. The provisions of the contingency plan shall be carried out immediately wherever there is a fire, explosion, release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

2. Distribution

A copy of the contingency plan and all revisions to the plan shall be:

- a. Maintained at the facility; and
- b. Submitted to all local police departments, fire departments, hospitals, contractors, and state and local emergency response teams that may be called up to provide emergency services.

3. Amendment of Contingency Plan

The contingency plan shall be reviewed and immediately amended, if necessary, whenever:

- a. Applicable regulations are revised;
- b. The plan fails in an emergency;
- c. The permit is revised;
- d. The list of emergency coordinators changes;
- e. The list of emergency equipment changes; and
- f. The facility changes in its design, construction, operation, or maintenance in a way that materially increases the potential for fire, explosions, or releases of hazardous waste.

The owner or operator shall notify the Department of all amendments to the contingency plan.

4. Emergency Coordinator

At all times there shall be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This

emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person shall have the authority to commit the resources needed to carry out the contingency plan.

5. Emergency Procedures

- a. Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) shall follow the procedures of the contingency plan as described in the approved Operation Plan.
- b. The owner or operator shall notify the Department and appropriate state and local authorities that the cleanup procedures are complete and all emergency equipment listed in the contingency plan is clean and fit for its intended use before the operations are resumed.
- c. The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan.
- d. The owner or operator shall submit within 24 hours an oral report and within 15 days a written report of each incident to the Department in accordance with item II.G.12. The Office of Emergency Services shall also be notified.

6. Arrangements with Local Authorities

- a. The owner or operator shall ensure that emergency response arrangements with local authorities are in effect upon the effective date of this permit.
- b. If local authorities refuse to enter into preparedness and prevention arrangements with the owner or operator, the owner or operator shall document this refusal in the operating record.

O. Required Equipment

1. The owner or operator shall have available at the facility all required safety and emergency equipment as described in the approved Operation Plan.
2. The facility water supply system shall be capable of providing water in adequate volume and pressure to maintain water hose streams.

3. Owner or operator shall maintain access to communications or alarm systems specified in the approved Operation Plan.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment shall be tested and maintained as necessary to ensure its proper operation in the time of emergency.

P. Required Aisle Space

The owner or operator shall maintain aisle space as needed to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment.

Q. Record Keeping and Reporting

1. Availability, Retention, and Disposition of Records

- a. All records, including plans required in this permit, shall be furnished upon request and made available at all reasonable times for inspection by any officer, employee, or representative of the Department, State Water Resources Control Board, or Regional Water Quality Control Board.

- b. The owner or operator shall maintain until closure is completed and certified by an independent engineer registered in California, the following records, reports, documents, and all amendments, revisions, and modifications thereof at the owner or operator's place of business and at the facility, so as to be available at all times to operating personnel:

- (1) Operating record.
- (2) Training records for current employees.
- (3) Hazardous Waste Facility Permit.
- (4) Waste analysis plan.
- (5) Contingency plan.
- (6) Closure plan.
- (7) Closure cost estimate.
- (8) Inspection schedules.

- c. The owner or operator shall retain the following records at the facility for at least three years:

- (1) Inspection record.

(2) Training records for former employees.

- d. The retention period for all records required in this permit is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Department.

2. Operating Records

- a. The owner or operator shall keep a written operating record at the facility.

The following information shall be recorded, as it becomes available, and maintained in the operating record until the closure of the facility:

- (1) Records and results of waste analyses and trial tests performed;
- (2) Summary reports and details of all incidents that require implementing the contingency plan;
- (3) Records and results of inspections (except these data need be kept only three years);
- (4) Monitoring, testing, or analytical data;
- (5) All closure cost estimates; and
- (6) All waste minimization certifications.

3. Reporting and Notification Requirements

- a. All reports and information requested by the Department shall satisfy the signatory requirements in item II.H. The waste minimization certifications as required in item II.J shall be signed in accordance with item II.H.

b. Annual Report

The owner or operator shall prepare and submit two copies of an annual report to the Department and one copy to the appropriate Regional Water Quality Control Board by March 1 of each year, beginning March 1, 1988. The annual report shall cover facility activities during the previous calendar year and shall include the following information:

- (1) The EPA identification number, name, and address of the facility;
- (2) The calendar year covered by the report;
- (3) Updated closure cost estimate for the facility;

- (4) The description and quantity of each hazardous waste the facility shipped during the year; and
- (5) Environmental monitoring data in accordance with Section 67195, Title 22, CAC.

R. Closure

1. Closure Plan and Amendment of Plan

- a. The owner or operator shall comply with the closure plan as described in the approved Operation Plan.
- b. The owner or operator may amend his closure plan at any time during the active life of the facility. The owner or operator shall propose to amend his plan any time changes in operating plans or facility design affect the closure plan or whenever there is a change in expected year of closure.
- c. The owner or operator shall submit to the Department for approval within 60 days, any proposed amendments made to the closure plan.
- d. The owner or operator shall notify the Department at least 180 days before the date he expects to begin closure.

2. Time Allowed for Closure

- a. Within 90 days after generating the final volume of hazardous wastes or 90 days after approval of the closure plan, if that is later, the owner or operator shall treat all hazardous waste in storage or in treatment or remove them from the site in accordance with the approved closure plan.
- b. The owner or operator shall complete closure activities in accordance with the approved closure plan within 180 days after receiving the final volume of waste or 180 days after approval of the closure plan, if that is later.

3. Disposal or Decontamination of Equipment

- a. When closure is completed, all facility equipment and structures shall have been properly disposed of or decontaminated by removing all hazardous waste and residues.
- b. At closure, all hazardous waste and hazardous waste residues shall be removed from treatment processes and equipment, discharge control equipment, and discharge confinement structures in accordance with the approved closure plan.

4. Certification of Closure

When closure is completed, the owner or operator shall submit to the Department certification both by the owner or operator and by an independent qualified engineer registered in California that the facility has been closed in accordance with the specifications in the approved closure plan.

S. Financial Responsibility

1. Closure Estimate for Facility Closure

- a. The owner or operator shall have a written estimate of the cost of closing the facility in accordance with the applicable closure requirements of this permit. The owner or operator shall keep this estimate and all subsequent estimates at the facility. The estimate shall equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive as indicated by its closure plan.
- b. The owner or operator shall prepare a new closure cost estimate whenever a change in the closure plan affects the cost of closure.
- c. By March 1 of each year, the owner or operator shall adjust the latest closure cost estimate using an inflation factor derived from the annual Implicit Price Deflator for Gross National Product as published by the U.S. Department of Commerce in its SURVEY OF CURRENT BUSINESS. The inflation factor shall be calculated by dividing the latest published annual deflator by the deflator for the previous year. The result is the inflation factor.

The adjusted closure cost estimate shall equal the latest closure cost estimate times the inflation factor.

- d. The adjusted closure cost estimate shall be submitted to the Department as part of the annual report required in item III.Q.3.b.

2. Financial Assurance and Liability

a. Financial Assurance

The owner or operator shall demonstrate to the Department continuous compliance with applicable sections of Article 17, Title 22, CAC, by providing documentation of financial assurance in at least the amount of the cost estimates required by item III.S.1.a.

b. Liability

The owner or operator shall demonstrate to the Department continuous compliance with H&S Code, Section 25245 and applicable sections of Article 17, Title 22, CAC by providing documentation of liability coverage in the required amounts.

An owner or operator who fulfills the requirements above will be deemed to be without the required financial assurance and liability coverage in the event of a bankruptcy, insolvency, or a suspension or revocation of the license or charter of the issuing institution. The owner or operator must obtain other financial assurance/liability coverage within 60 days of such events.

The owner or operator shall comply with all other financial responsibility and facility closure requirements of the Department when enacted.

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